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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,680	10/17/2006	Yuki Takii	TIP-06-1314	2791

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EXAMINER	
KILPATRICK, BRYAN T	
ART UNIT	**PAPER NUMBER**
1772	

NOTIFICATION DATE	DELIVERY MODE
08/18/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

Office Action Summary	Application No.	Applicant(s)	
	10/593,680	TAKII ET AL.	
	Examiner	Art Unit	
	BRYAN KILPATRICK	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *2 and 3* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendments and arguments/remarks filed on 14 June 2011 have been entered and fully considered.

2. Instant claims 1 and 4 have been amended currently.

3. Instant claims 2-3 have been cancelled currently.

4. Instant claim 15 has been newly added.

5. Instant claims 1 and 4-15 are pending currently.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0134316 A1 (Tashiro et al.).

In regards to instant claims 1 and 4-15, Tashiro et al. discloses a method of stirring a reaction solution in a micro reaction vessel by imparting a magnetic field fluctuation from the exterior of said reaction vessel to magnetic beads contained in said reaction solution (Abstract and Fig. 1-2). The method of Tashiro et al. further discloses employing at least one of two plates with DNA immobilized on the surface, a reaction

solution for hybridization that has target DNA, and sealing of magnetic beads within the reaction vessel prior to mixing via a magnetic field (paragraph [0020]-[0021] and Fig. 1-2). Tashiro et al. disclose that the magnetic beads have uniformed and/or non-uniformed diameters of about 0.001 to 0.1 mm (paragraph [0021]), and that the beads are rotated and stirred using multiple electromagnets (paragraph [0027]). Tashiro et al. discloses that the magnetic beads employed are treated with a resin to prevent them from contacting and/or reacting with components in the reaction solution (paragraph [0022]). Tashiro et al. discloses the use of probes/dots stamped on a slide glass with a diameter of about 100 to 150 micrometer (paragraph [0035]) and that the probes/dots comprise DNA for hybridization (paragraph [0002]); furthermore, it is well known that circular drops of liquids develop flat surface when they a placed on a flat surface. Tashiro et al. discloses that stirring with the beads is done in the upper part of the reaction vessel (paragraph [0038] and Fig. 2).

Tashiro et al. does not explicitly state that the carrier and/or a container have a structure that prevent fine particles or air bubbles from coming into contact with a selective binding substance-immobilized surface carrier. However, it is evident that the reaction vessel employed by Tashiro et al. has upper and lower structures (Fig. 1-2). Magnetic beads and electromagnets are employed for mixing and are maintained in the upper part of their reaction vessel, and probes/dots stamped on a slide glass are employed in the lower part of the same reaction vessel (Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the design of the reaction vessel of Tashiro et al. to prevent the beads of the

upper area of the reaction vessel from contacting the stamped probes of the lower surface in the same reaction vessel – similar to fine particles being prevented from contacting a selective binding substance-immobilized surface carrier as stated by the instant claims.

Response to Arguments

Applicant's arguments with respect to claims 1 and 4-15 have been considered but are moot in view of the new ground(s) of rejection.

For the purpose of clarity, regarding Applicant's statement on p. 4 of the remarks filed on 14 June 2011 that, "Thus, there is no disclosure in Tashiro that would provide guidance to one skilled in the art as to how to achieve the prevention of contact by structural means, as opposed to magnetic means. Thus, the Applicants respectfully submit that Tashiro is inapplicable." Examiner respectfully disagrees. Tashiro et al. appears to be applicable to the instant claims since it discloses a stirring method that employs a reaction vessel that comprises upper and lower structures (Fig. 1-2) comprising magnetic beads and electromagnets that are maintained in the upper part of their reaction vessel, and probes/dots stamped on a slide glass that are maintained in the lower part of the same reaction vessel (Fig. 2); both sections appear to be comparable to the carrier and container of the instant claims. Therefore, it appears that Tashiro et al. meets the newly added structural limitations of the instant claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN KILPATRICK whose telephone number is (571)270-5553. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, In Suk Bullock can be reached on (571)272-5954. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. K./
Examiner, Art Unit 1772

/SAM P SIEFKE/
Primary Examiner, Art Unit 1772